

# Monthly Drought Update Tuesday May 6, 2014 San Luis Obispo County

# **CURRENT CONDITIONS**

#### **U.S. Drought Monitor Status:**

The latest U.S. Drought Monitor report released April 24, 2014 indicates San Luis Obispo County remains at the D4 – Exceptional Drought intensity rating. The recent rain that fell April 3-4 did not change the local D4 designation.

# **Recent Precipitation:**

San Luis Obispo County has had minimal rainfall since the proclamation of a local emergency due to drought conditions on March 11, 2014. As of April 21, 2014, total rainfall amounts to date are approximately 33% of average annual rainfall totals.

San Luis Obispo County Precipitation Totals (in inches):

Community	Rainfall Total Received from Last 30-Day Update (3/25/14 to 4/21/14)	Rainfall To Date (7/1/13 to 4/21/14)	Avg. Rainfall
Nipomo South (730)	1.22	4.45	16.0
Lopez Dam (737)	1.68	8.39	21.0
SLO Reservoir (749)	1.30	8.19	25
Los Osos Landfill (727)	1.14	6.61	20.0
Cambria (717)	1.41	6.69	22.0
Rocky Butte (703)	2.45	11.54	39.0
Santa Margarita (723)	1.74	8.35	26.0
Salinas Dam (719)	1.49	7.28	23.0
Atascadero (711)	0.87	5.63	18.0
Templeton (762)	1.34	6.18	14.7
Paso Robles (city)	1.12	6.11	14.3
Hog Canyon (709)	0.87	3.94	16.0

Source: www.slocountywater.org County of San Luis Obispo-City of Paso Robles Website

# **Near-term Outlook for Precipitation:**

As our state's rainy season (November-April) comes to an end, it is highly unlikely that precipitation totals will increase significantly. This winter's below average rain and snowfall worsens drought conditions in this third straight dry year.

# Reservoir Levels (% of capacity):

Note: Historical averages calculated using data from the following time frame:

Nacimiento: 1959 – 2013; Lopez: 1994-2013; Salinas: 1987-2013; and Whale Rock: 1985-2013.

Reservoir	% of Capacity	Avg. % Capacity for Date	Updated
Nacimiento	22%	64%	4/18/2014
Lopez	56%	79%	4/21/2014
Salinas	36%	79%	4/21/2014
Whale Rock	54%	80%	4/16/2014

Source: www.slocountywater.org County of San Luis Obispo

# **STATE WATER**

**Status:** The Department of Water Resources (DWR) has announced that State Water "Carryover" water is available to agencies this year to provide for 2014 requested agency deliveries. DWR has increased its allocation for South of Delta Service Contractors from 0% to 5%. This increase, while modest, will enable approximately 200,000 acre feet of water to state water project users. The District has maximized State Water deliveries to Zone 3 agencies.

**Actions:** The Public Works Department continues to coordinate with DWR regarding State Water Deliveries including correspondence with Mark Cowin, DWR Director.

#### **VULNERABLE WATER SYSTEMS**

### **County Service Areas (CSA's):**

Historic water use estimates have been prepared for Santa Margarita, Cayucos, and Shandon (Attachment A) illustrating water sources, system losses, residential and non-residential water usage. This information will assist in monitoring trends to anticipate needed water management decisions. In addition, the Public Works Department is preparing letters encouraging conservation and displaying historic water use for May distribution.

# Santa Margarita (CSA 23)

- Santa Margarita February and March rainfall of nearly 8 inches resulted in an increase in groundwater level.
- Drought response level remains at ALERT status.
- Primary pumping is from shallow well No. 4. Deep well No. 3 is available for use if needed to supplement well No. 4.
- An emergency water supply project connecting Santa Margarita to Atascadero Mutual Water Company is being pursued through the Integrated Regional Water Management (IRWM) drought expedited implementation grant process.

#### Shandon (CSA 16)

- Two wells currently provide all water to the Shandon community.
- A State water turnout design is nearly completed. Subsequent approval of final construction documents and agreements is anticipated to be completed this summer, with construction to follow.

#### Cayucos (CSA 10A)

• Adequate supply is available Whale rock, Nacimiento, and one on - site well.

#### CSA 12 (Avila Valley)

 Adequate supply is available from Lopez and State water "carryover" water sources for this year.

# Chorro Valley Institutions (CMC, Animal Services, Sheriff, County Operations, Camp San Luis, Cuesta College, County Office of Education):

- State water carryover water is available and being provided.
- An interconnection between the existing Nacimiento Water Project pipeline and the existing Salinas pipeline is being pursued through the State's drought emergency funds (Attachment B).
- The existing distribution system is being evaluated to assure water losses are minimized.

#### Non-County Operated:

City of Morro Bay

Status: Emergency inter-tie with Chorro Valley and desal permit.

• Cambria Community Services District

<u>Status:</u> Emergency San Simeon Creek Brackish Water Supply Project (See State and Federal Key Actions Section below for a more detailed description).

San Simeon Community Services District

<u>Status:</u> Proposed brackish desal & inter-tie with Cambria CSD (See State and Federal Key Actions Section below for a more detailed description).

Heritage Ranch Community Services District

<u>Status:</u> The Nacimiento River is the only available water source for the community of Heritage Ranch. Emergency inter-tie agreement between Flood Control District and CSD near complete and will be submitted to governing boards for approval soon.

#### Rural Paso Robles residents

Status: Continue to identify water trucking options and outreach efforts.

#### **IMPACTS**

#### **Agricultural Impacts:**

# **Agricultural Conditions:**

Staff from the County Department of Agriculture/Weights and Measures and the San Luis Obispo County Office of the University of California Cooperative Extension (UCCE) have collaborated to create an agricultural producer survey to help compile information about the effects of the drought on the local agricultural industry. The monthly survey is sent to producers, local agricultural organizations and select UCCE Farm Advisors representing a wide variety of crop types and livestock. It is hoped the participation from producers will remain strong, providing a good picture of on-the-ground conditions and impacts from the drought.

The latest survey results indicate agricultural conditions continue to deteriorate due to lack of moisture. Livestock producers continue to sell animals, haul in water, and buy feed to maintain the greatly reduced herds that remain. The April 3-4 rains only minimally improved grazing conditions because what little rain that fell was too little and too late in the normal grass growing cycle.

Avocado growers continue to "stump" or cut trees back and implement deficit irrigation techniques to manage available water supplies. This will result in crop loss for several years until available moisture conditions return to normal levels.

Vegetable, strawberry and nursery product growers are evaluating irrigation systems to increase efficiency to conserve water.

Grape growers are also evaluating irrigation systems for efficiency and in some cases, limiting acreage planted. The reliance of overhead sprinklers as a frost protection measure in the future is also being evaluated.

#### Agricultural Assistance Programs:

On April 15, 2014, United States Department of Agriculture (USDA) Agricultural Secretary Vilsack announced that eligible farmers and ranchers can now sign up for USDA disaster assistance programs restored by passage of the 2014 federal Farm Bill. The four programs Administered by the USDA Farm Service Agency that are available are the Livestock Forage Disaster Program; the Livestock Indemnity Program; the Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish Program and the Tree Assistance Program. Producers should contact the local USDA Farm Service Agency in Templeton at 805-434-0398 for more information.

# Fire Danger:

#### Fire Danger:

As shown in the illustration to the right, forecasts indicate the County of San Luis Obispo will have an above normal large fire potential. As of April 21, there have been 1,040 fires reported across the State since January 1, burning 2,393 acres. This year's fire activity is well above the year-to-date average of 428 fires, burning 1,179 acres.

#### Staffing:

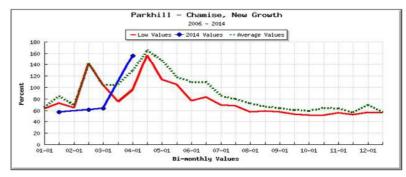
CAL FIRE's Northern Region added 17 engines last week and plans to add 42 more this week. The Southern Region continues with 120 engines, which is already an increased staffing level due to dry conditions and high fire activity.



# Live Fuel Moisture (LFM):

(LFM is the moisture content of live vegetation expressed as a percentage of the oven-dry weight.)

Due to spring rains, vegetation is currently undergoing the normal spring growth "spike". Live fuel moistures are near normal, despite relatively low precipitation amounts, due to the adaptability of these shrub species. Currently, LFM in most areas is higher than 100, which is considered the level when shrub fuels become "available" for burning. Spring rains have also been adequate to produce a crop of grass fuels, which could increase fire activity beginning in mid-May due to an increase in fuel continuity compared to last year.



Source: http://www.wfas.net/nfmd/public/states\_map.php?state=CA

# **Dead Fuel Moisture:**

(The moisture content of dead organic fuels is another important component of the relative fire danger. As with LFM above, dead fuel moisture levels are a good indicator of how likely fuels are to ignite and how intensely they will burn. 100-hr fuel refers to vegetation between 1 and 3 inches in diameter and 1000-hr fuel is 3-6 inches. When the fuel moisture content is low, fires start easily and will spread rapidly.)

Currently, both 100-hr and 1000-hr fuel moisture content levels remain well below average.

# Temperatures/Relative Humidity (RH):

Due to this past winter's weather patterns, and the prevalence of high pressure driven off-shore Santa Lucia wind conditions, average temperatures have been higher than in recent years. Coupled with correspondingly low RH levels, the fire danger has remained elevated throughout the fall/winter months except for two short periods during precipitation events. Warmer conditions also cause continuous drying of both live and dead fuels which is cumulative and likely to lead to unprecedented dry fuel conditions for the remainder of the year or until there is significant rainfall. April high temperatures continue to run above normal in most areas of the County.

# Energy Release Component (ERC):

(ERC is an index related to how hot a fire could burn. It is directly related to the 24-hour, potential worst case, total available energy (BTUs) at the head of a fire. The ERC can serve as a good characterization of fire season as it tracks seasonal fire danger trends well. ERC has low variability, and is the best fire danger component for indicating the effects of intermediate to long-term drying on fire behavior.)

Currently, ERC values are well above normal.

# Other Fire Danger Indicators:

(Another important factor increasing the fire danger (due to increased dead fuels) as well as an indicator of drought severity and the resulting effects on forcet/space health is the widespread increase in the confidence.

Source: http://www.wfas.net/

forest/range health is the widespread increase in the occurrence of tree mortality throughout the County.)

In many inland areas, trees already under severe drought stress experienced significant frost/freeze damage. Due to their diminished natural defense mechanisms, stressed trees are particularly vulnerable to secondary pests such as bark beetles and defoliating insects such as oak moths.

#### **Economic:**

As mentioned in previous updates, negative economic impacts continue to mount. To date, 56 of the 58 California counties have been declared as official disaster areas. Farmers in these counties are eligible for low interest emergency loans and other disaster assistance programs. No information is available yet regarding impact on labor due to drought.

#### STATE & FEDERAL KEY ACTION ITEMS FROM LAST MONTH

#### **State & Federal Actions:**

#### Drought Operations Plan:

The Department of Water Resources and the Bureau of Reclamation released their Drought Operations Plan outlining planed water management actions through November. The Plan was developed to ensure adequate water supplies exist through the coming dry months for human health and safety purposes, salinity control in the Delta, and fish and wildlife protection.

#### Drought Relief Food Assistance:

The California Department of Finance authorized \$5.1 million in funding to the state's Department of Social Services to provide emergency food aid. On April 17, 2014, the California Department of Social Services announced that food banks in 24 drought-impacted counties will receive shipments of the first \$5.1 million in food assistance. The County of San Luis Obispo did not qualify for assistance.

#### Emergency drinking water funds guidelines proposed:

The California Department of Public Health has posted its guidelines for \$15 million in Public Water System Drought Emergency funds approved through the state's emergency drought legislation in March.

# Water efficiency grants moves forward:

The California Department of Water Resources released draft guidelines for \$200 million of expedited bond funding to improve local water systems' reliability and efficiency. These funds will be available for projects that are part of 48 Integrated Regional Water Management (IRWM) planning efforts underway throughout the state. On April 22, 2014, the Board of Supervisors approved an agreement for professional engineering services with Carollo Engineers, Inc. to develop the IRWM expedited drought grant application for the region.

#### Local Coordination:

The Governor's Office of Emergency Services (Cal OES) continues to coordinate with state agencies and local governments to take actions that conserve water and coordinate state responses to the drought. San Luis Obispo County OES continues to provide weekly reports to the State's online reporting system and through ongoing weekly conference calls. As of April 21, 2014, Cal OES is reporting that 18 counties have proclaimed a local emergency due to the drought, including San Luis Obispo County.

#### Cambria and San Simeon Visit & Tour

On April 18, 2014, representatives from Cal OES, Department of Public Health, Department of Water Resources, Coastal Commission, and county officials visited Cambria and San Simeon to assess drought impacts in both areas. Both Cambria and San Simeon Community Services Districts (CSDs) have significant water restrictions in place. Effective March 1, 2014, Cambria CSD implemented a State 3 Water Shortage Emergency Condition. On April 9, 2014, the San Simeon CSD declared a Stage 3 water emergency.

Cambria water shortage is resulting in various impacts to the community. It is reported that restaurants are using paper plates and cups, public restrooms have been closed and replaced with portable facilities, and the CSD has purchased 35 high efficiency washing machines for the local laundry mat. To ensure an adequate water supply to its customers in the current drought, the Cambria CSD is completing an emergency water supply project. This project will include an advanced water treatment plant on District owned property off San Simeon Creek Road that will treat brackish water to produce potable water. The facility will include necessary pretreatment, desalination of brackish water, advanced oxidation and disinfection, and post-treatment. Along with the lower san Simeon Creek brackish water project, the CCSD is also upgrading wells and treatment along lower Santa Rosa Creek to access deeper groundwater in the lower portions of the Santa Rosa aquifer.

San Simeon water supply issues are also resulting in various impacts to the community. Earlier this year, lower water levels allowed for seawater intrusion, causing chloride levels to spike from about a normal of 30 mg/L to over 1,000 mg/L for a period of time. The increased chloride level is reported to have caused issues throughout the community such as damaging water-using appliances. To mitigate the spike, the CSD used an additional, standby emergency well to blend the water. Due to recent rains, the issue for the moment is resolved, however it is anticipated that chloride levels will again increase during the summer, as the water levels again recede.

#### Chorro Valley Institutions

During the visit to Cambria and San Simeon, information was also shared with state agencies regarding the San Luis Obispo County Regional Inter-Tie Project for Water Supply Security for the Chorro Valley Institutions. Existing infrastructure from two local reservoirs with available reserve water terminates approximately 0.75 miles from the CMC water treatment plant. The proposed project inter-ties with the Salinas Reservoir (Santa Margarita Lake) and Nacimiento Lake conveyance pipelines in order to provide Nacimiento water to the CMC Water Treatment Plant (Attachment B).

# COUNTY DROUGHT TASK FORCE KEY ACTION ITEMS FROM LAST MONTH

#### **County Water Resources:**

- Downstream releases into Arroyo Grande Creek are currently following the approved Interim Downstream Release Schedule (IDRS).
- Zone 3 "surplus" water discussions are ongoing with Zone 3 agencies; Board of Supervisors consideration leading to a Zone 3 Advisory Committee meeting in May.

# **County Facilities Usage & Conservation Actions:**

General Services Agency has taken the following actions since the last update: Facilities:

 Replaced sink faucet aerators with low-flow fixtures in County libraries and community buildings in Cayucos, Cambria, Los Osos, and Morro Bay, saving an estimated 150 gallons of water per week.

# County Parks:

- Reduced water times at Parks by 20% minimum.
- Composted (mulched) areas with chips to retain moisture.
- Completed aerification on sports fields to increase water penetration in the soil.
- Ordered a Wireless Central Irrigation Control System for Nipomo Park that will automatically adjust to climatic conditions and alert staff to any issues.

#### **County Public Outreach Actions:**

In an effort to raise awareness about water supply issues and communicate the call for a 20% voluntary reduction in water usage, the County continues to examine multiple channels of communication for water conservation outreach efforts. The task force is currently utilizing multiple tools to communicate the importance of water conservation.

# Tool #1: Local Collaboration

<u>Status:</u> The County continues to work collaboratively with a network of water purveyors and cities for broad public outreach.

- Get Ahead or Get Parched Workshop (4/25/2014): The County, along with the Department of Water Resources and the University of California, collaborated to provide a workshop on managing landscapes during the drought. The workshop, designed for landscape irrigation managers, featured indoor and outdoor water conservation presentations. The workshop was held at the San Luis Obispo Veterans Memorial Hall.
- <u>Public Works Department Outreach:</u> The Public Works Department has presented drought information to the WRAC, Paso Blue Ribbon Committee, Zone 3 and at a City of SLO landscaper water conservation seminar.

# Tool #2: Website Marketing & Social Media Status:

- <u>Drought Conditions and Water Conservation County Webpage (published 4/4/2014):</u> The County Administrative Office created a webpage that contains drought information, latest news and updates, water conservation tips, and links to other drought related websites. A link to the page can be found on the County's homepage. <a href="http://www.slocounty.ca.gov/admin/Drought Update">http://www.slocounty.ca.gov/admin/Drought Update</a>.
- <u>Drought Websites:</u> As presented in the March 11, 2014 staff report the following websites are currently in use by the County:
  - Save our Water www.saveourwater.org:
  - o SLO Water Wise Landscaping website www.slowaterwiselandscaping.com
  - o San Luis Obispo County Water Resources website www.slocountywater.org
  - University of California Cooperative Extension http://cesanluisobispo.ucanr.edu/Drought Information/

#### Tool #3: Water Purveyor Outreach (use water bill as the first-line educational tool)

<u>Status:</u> The Public Works Department continues to develop and distribute water conservation information to water customers. The following is a list of the department's current efforts:

- Notifications encouraging water conservation have been sent to County water customers with bimonthly bills.
- District has requested Zone 3 agencies to provide recent historic water usage information including water source usage, residential daily use, system water losses, etc.
- Informal discussions with local Zone 3 agricultural water users have been initiated. An Agriculture-water workshop with Zone 3 growers will be held in July.

# Tool #4: Public Service Announcements (PSAs)

<u>Status:</u> Staff continues to remain in contact with multiple media sources to request the airing of PSAs prepared by the State.

#### Tool #5: News Media

<u>Status:</u> Staff continues to examine all media outlets. Staff submitted drought awareness and water conservation slides to AGP Video. The slides are currently part of the Channel 21 and Channel 20 slideshows (SLO-SPAN network) and televised as part of local government meetings. The slides have been incorporated into the Planning Commission and Board of Supervisors' slideshows that play during break periods. The Public Works Department gave a tour of the CMC inter-tie to the Tribune on Thursday, April 24. It is anticipated that a news story will be published within the week.

#### Tool #6: Advertising

<u>Status:</u> Staff is continuing to research costs for multiple sources of advertising including television, radio, and billboards.

#### Other Marketing Tools

The County continues to examine other marketing tools for water conservation outreach.

#### DROUGHT RELATED WEBSITES FOR MORE INFORMATION

State's Water Conservation Campaign; Save our Water (www.saveourh2o.org)

California's Drought Information Clearinghouse; Dought.CA.Gov (ca.gov/drought/)

California Department of Food and Agriculture; Drought information (www.cdfa.ca.gov/drought/)

California Department of Water Resources; Current Water Conditions (www.water.ca.gov/waterconditions/drought/)

California State Water Resources Control Board; Water Rights, Drought Info and Actions (<a href="www.swrcb.ca.gov/waterrights/water">www.swrcb.ca.gov/waterrights/water</a> issues/programs/drought/index.shtml)

California Department of Public Health; Drinking Water CDPH Drinking Water Program (www.cdph.ca.gov/programs/pages/dwp.aspx)

USDA Disaster and Drought Assistance Information; USDA Programs (usda.gov/wps/portal/usda/usdahome?navid=DISASTER\_ASSISTANCE)

UC Cooperative Extension Drought Information Resources; Drought Information Resources; cesanluisobispo.ucanr.edu/Drought Information/

#### Attachment A

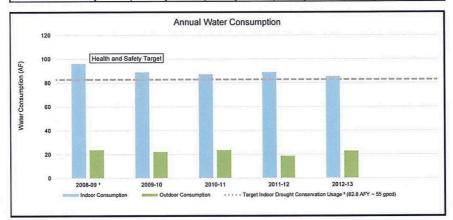
# Agency: [Part of] Cayucos (CSA 10A)

#### Production - Acre-Feet

Sources of Supply	2008-09 1		2009-10		2010-11		2011-12		2012-13	
Whale Rock Reservoir <sup>7</sup>	136	100%	129	100%	129	100%	126	100%	130	100%
Total Production	136	100%	129	100%	129	100%	126	100%	130	100%
System Losses	15	11%	16	12%	17	13%	17	13%	20	15%
Net Distribution	121	89%	113	88%	112	87%	109	87%	110	85%

#### Consumption - Acre-Feet

Usage	2008-09 1		2009-1	0	2010-	11	2011-	12	2012-	13
Residential <sup>2</sup>	120	99%	111	99%	111	99%	108	99%	108	98%
Non-Residential	1	1%	2	1%	1	1%	1	1%	2	2%
Total	121	100%	113	100%	112	100%	109	100%	110	100%



# Indoor and Outdoor Residential Consumption - Acre-Feet

Residential	2008-09 1		2009-1	0	2010-	11	2011-1	2	2012-	13
Indoor Consumption 4	96	80%	89	80%	87	79%	89	83%	85	79%
Outdoor Consumption 5	24	20%	22	20%	23	21%	19	17%	23	21%
Total	120	100%	111	100%	111	100%	108	100%	108	100%

#### Consumption - Gallons Per Person Per Day

GPCD	2008-0	2008-09 1		10	2010-	11	2011-	12	2012-13	
Population <sup>6, 8</sup>	1,337	N/A	1,348	N/A	1,362	N/A	1,339	N/A	1,348	N/A
Indoor gpcd	64.2	80%	59.0	80%	57.3	79%	59.3	83%	56.6	79%
Outdoor gpcd	15.9	20%	14.7	20%	15.4	21%	12.4	17%	15.1	21%
Total gpcd	80.1	100%	73.6	100%	72.7	100%	71.7	100%	71.7	100%

- 1. Water year = Fiscal Year = July 1 June 30.
   2. The Residential Customer Class includes both Single Family and Multi-Family Classes.
- 3. Target Indoor Drought Conservation Usage = 50 GPCD x 2012-13 Population x 365 days/year x 325,851 gallons/AF
- The lowest bi-monthly usage occurred during the following months, and was assumed to represent indoor usage only: Dec 2008, Feb 2010, Apr 2011, Feb 2012, Feb 2013.
   Annual Outdoor Consumption = Total Residential Consumption Annual Indoor Consumption Population estimates based on 2007 Cayucos Water Management Plan Update which accounts for
- estimated vacancies.
- Whale Rock Reservoir serves as primary source of water. CAWO and Standby Wells are used on 8. 2013-14 population assumed to equal 2012-13 population.

Updated: 4/21/2104

V:\Zone 3\Surplus Water\Water Data Metrics - Compiled

#### Attachment A

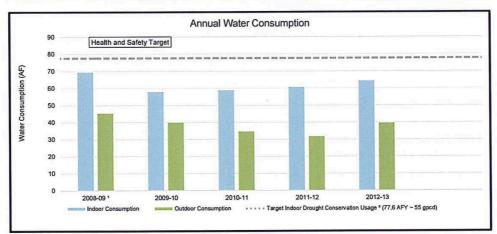
# Agency: Shandon (CSA 16)

# Production - Acre-Feet

Sources of Supply	2008-09 1		2009-1	0	2010-1	11	2011-12		2012-13	
Well #3	0	0%	0	0%	0	0%	0	0%	0	0%
Well #4	66	42%	62	43%	56	42%	60	42%	64	43%
Well #5	90	58%	83	57%	79	58%	84	58%	85	57%
Total Production	157	100%	146	100%	135	100%	144	100%	149	100%
System Losses	34	22%	41	28%	36	26%	46	32%	39	26%
Net Distribution	122	78%	105	72%	99	74%	98	68%	110	74%

Consumption - Acre-Feet

Usage	2008-09 1		2009-1	0	2010-	11	2011-1	2	2012-1	3
Residential <sup>2</sup> 11		94%	98	93%	93	94%	92	94%	104	95%
Non-Residential	7	6%	7	7%	6	6%	6	6%	6	5%
Total	122	100%	105	100%	99	100%	98	100%	110	100%



Indoor and Outdoor Residential Consumption - Acre-Feet

Residential	2008-0	2008-09 1		10	2010-	11	2011-1	12	2012-	13
Indoor Consumption 4	69	60%	58	59%	59	63%	61	66%	64	62%
Outdoor Consumption 5	45	40%	40	41%	35	37%	32	34%	40	38%
Total	115	100%	98	100%	93	100%	92	100%	104	100%

Consumption - Gallons Per Person Per Dav

GPCD	2008-09 1		2009-1	10	2010-	11	2011-12		2012-13	
Population <sup>6</sup>	1,252	N/A	1,255	N/A	1,255	N/A	1,260	N/A	1,260	N/A
Indoor gpcd	49.5	60%	41.1	59%	41.9	63%	43.0	66%	45.5	62%
Outdoor gpcd	32.4	40%	28.4	41%	24.6	37%	22.5	34%	28.1	38%
Total gpcd	81.9	100%	69.5	100%	66.4	100%	65.4	100%	73.6	100%

# Notes:

- Water year = Fiscal Year = July 1 June 30.
   The Residential Customer Class includes both Single Family and Multi-Family Classes.
   Target Indoor Drought Conservation Usage = 55 GPCD x 2012-13 Population x 365 days/year x 325,851 gallons/AF
   The lowest bi-monthly usage occurred during the following months, and was assumed to represent indoor usage only: Feb/Mar 2009, Feb/Mar 2010, Dec/Jan 2011, Dec/Jan 2012, Dec/Jan 2013.
- 5. Annual Outdoor Consumption = Total Residential Consumption Annual Indoor Consumption
- 6. Population estimates provided by Planning Department

Updated: 4/21/2104

#### Attachment A

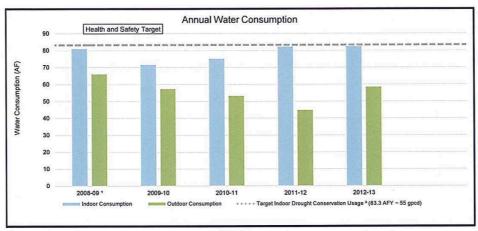
# Agency: Santa Margarita (CSA 23)

# Production - Acre-Feet

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Sources of Supply	2008-09 1		2009-10		2010-11		2011-12		2012-13	
Water Well #3 (Deep)	94	51%	76	44%	47	28%	34	20%	38	22%
Water Well #4 (Shallow)	92	49%	96	56%	119	72%	139	80%	138	78%
Total Production	186	100%	172	100%	167	100%	174	100%	177	100%
System Losses	25	13%	27	16%	23	14%	35	20%	21	12%
Net Distribution	161	87%	144	84%	144	86%	139	80%	156	88%

Consumption - Acre-Feet

Usage	2008-09 1		2009-1	0	2010-1	11	2011-1	2	2012-1	3
Residential <sup>2</sup>	147	91%	129	89%	128	89%	127	91%	141	90%
Non-Residential	14	9%	15	11%	15	11%	12	9%	15	10%
Total	161	100%	144	100%	144	100%	139	100%	156	100%



Indoor and Outdoor Residential Consumption - Acre-Feet

Residential	2008-09 1		2009-10		2010-11		2011-12		2012-13	
Indoor Consumption 4	81	55%	72	56%	75	59%	82	65%	82	59%
Outdoor Consumption 5	66	45%	57	44%	53	41%	45	35%	58	41%
Total	147	100%	129	100%	128	100%	127	100%	141	100%

Consumption - Gallons Per Person Per Day

GPCD Population <sup>6</sup>	2008-0	2008-09 1		2009-10		2010-11		2011-12		2012-13	
	1,250	N/A	1,257	N/A	1,262	N/A	1,257	N/A	1,265	N/A	
Indoor gpcd	57.9	55%	50.9	56%	53.2	59%	58.4	65%	58.2	59%	
Outdoor gpcd	47.2	45%	40.7	44%	37.7	41%	31.9	35%	41.3	41%	
Total gpcd	105.1	100%	91.6	100%	90.8	100%	90.3	100%	99.4	100%	

#### Notes:

- 1. Water year = Fiscal Year = July 1 June 30.
- 2. The Residential Customer Class includes both Single Family and Multi-Family Classes.
  3. Target Indoor Drought Conservation Usage = 55 GPCD x 2012-13 Population x 365 days/year x 325,851 gallons/AF

  4. Febuary was usage assumed to represent indoor usage only.
- 5. Annual Outdoor Consumption = Total Residential Consumption Annual Indoor Consumption
- Population estimates based on 2.48 people per residential meter (per Planning Department) and calculated using June figures. Feb 2014 figures used for 2013-14 year.

Updated: 4/21/2104

#### Attachment B

# SAN LUIS OBISPO COUNTY REGIONAL INTER-TIE PROJECT FOR WATER SUPPLY SECURITY

FACILITIES IMPACTED: CALIFORNIA MEN'S COLONY, COUNTY JAIL, COUNTY OES, CUESTA COLLEGE, CAMP SAN LUIS - NATIONAL GUARD, SLO COUNTY OFFICE OF EDUCATION, CITY OF MORRY BAY

Populations: CMC (5,000), Cuesta (11,000), County Jail (690), City of Morro Bay (10,370) = 27,060

Water Supply: State Water, Reservoir, Wells

Issue: Significant water supply shortage if State Water is undeliverable in 2015

Project Description: Inter-tie the Salinas Reservoir (Santa Margarita Lake) & Nacimiento Lake conveyance pipelines in order to provide Nacimiento water to the CMC Water Treatment Plant. Nacimiento has 6,000 AF of reserve water available for use. A 0.8 mile extension of the Salinas water line will need to be constructed in order to deliver the water to the CMC Water Treatment Plant (WTP) for use in an emergency.

#### Estimated Cost:

- 1. Inter-tie with Nacimiento Water Line = \$123,500
- 2. Extension of Salinas Reservoir Water Line to CMC WTP = \$1.2M to \$2.7M

